

Amendment to the Claims:

This listing of the claims will replace all prior versions, and listings of claims in the present patent application:

Listing of Claims:

Claim 1 (original). A method for generating an organic plug within a via, said via residing in an integrated circuit structure having a silicon containing dielectric material, said method comprising:

firstly, applying an organic compound to said IC structure, said organic compound configured to occupy said via and a surface of said IC;

secondly, feeding a nitrous oxide (N₂O) gas into a reactor;

thirdly, generating a plasma in said reactor; and

fourthly, removing a portion of said organic compound so that said organic plug occupies said via.

Claim 2 (original). The method of claim 1 wherein said organic compound is an antireflective coating (ARC).

Claim 3 (original). The method of claim 1 wherein said organic compound is a bottom antireflective coating (BARC).

Claim 4 (currently amended). The method of claim 1 further comprising generating a gas mixture by mixing a diluent with said N₂O gas ~~said N₂O gas~~, and applying said gas mixture to said reactor.

Claim 5 (original). The method of claim 4 wherein said diluent is a noble gas.

Claim 6 (original). The method of claim 1 wherein said method for generating said organic plug is applied during one of a plurality of steps performed during a dual damascene process.

Claim 7 (original). The method of claim 1 wherein said silicon containing dielectric material is selected from a group consisting of organosilicate glass (OSG), silicon dioxide (SiO_2), and fluorinated silicate glass (FSG).

Claim 8 (original). A method for generating an organic plug within a via, said via residing in an integrated circuit structure having a first photoresist layer, a second intermediate layer, and a third silicon containing dielectric layer, said method comprising:

firstly, applying an organic compound to said IC structure, said organic compound configured to occupy said via and a surface of said IC;

secondly, feeding a nitrous oxide (N_2O) gas into a reactor;

thirdly, generating a plasma in said reactor; and

fourthly, removing a portion of said organic compound to generate said organic plug within said via.

Claim 9 (original). The method of claim 8 wherein said organic compound is an antireflective coating (ARC).

Claim 10 (original). The method of claim 8 wherein said organic compound is a bottom antireflective coating (BARC).

Claim 11 (currently amended). The method of claim 8 further comprising generating a gas mixture by mixing a diluent with said N₂O gas ~~said N₂Ogas~~, and applying said gas mixture to said reactor.

Claim 12 (original). The method of claim 11 wherein said diluent is a noble gas.

Claim 13 (original). The method of claim 8 wherein said method for generating said organic plug is applied during one of a plurality of steps performed during a dual damascene process.

Claim 14 (original). The method of claim 8 wherein said silicon containing dielectric material is selected from a group consisting of organosilicate glass (OSG), silicon dioxide (SiO₂), and fluorinated silicate glass (FSG).

Claim 15 (original). A method for generating an organic plug within a via, said via residing in an integrated circuit structure having a first photoresist layer, a second intermediate layer, and a third silicon containing dielectric layer, said method comprising:

firstly, applying an organic compound to said IC structure wherein said organic compound is a bottom antireflecting coating (BARC), said organic compound configured to occupy said via and a surface of said IC;

secondly, feeding a nitrous oxide (N₂O) gas into a reactor;
thirdly, generating a plasma in said reactor; and
fourthly, removing a portion of said organic compound to generate said organic plug within said via.

Claim 16 (currently amended). The method of claim 16 further comprising generating a gas mixture by mixing a diluent with said N₂O gas ~~said N₂Ogas~~, and applying said gas mixture to said reactor.

Claim 17 (original). The method of claim 16 wherein said diluent is a noble gas.

Claim 18 (original). The method of claim 16 wherein said silicon containing dielectric material is selected from a group consisting of organosilicate glass (OSG), silicon dioxide (SiO₂), and fluorinated silicate glass (FSG).

Claim 19 (original). The method of claim 18 wherein said method for generating said organic plug is applied during one of a plurality of steps performed during a dual damascene process.